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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,384	11/09/2001	Christopher J. Conway	9858-000037	1096

7590

09/25/2002

Kelly K. Burris, Esq.
Harness, Dickey & Pierce, P.L.C.
Suite 400
7700 Bonhomme Avenue
Saint Louis, MO 63105

EXAMINER

MCCAMEY, ANN M

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,384

Applicant(s)

CONWAY ET AL.

Examiner

Ann M McCamey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, 7, 17, 18, 27, 29, 30, 32, 33 and 35-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al. (US 5,820,409).

Regarding claim 1, Clark et al. disclose (Fig. 12) a connector for use in a plasma arc apparatus comprising:

a housing 24 defining a hollow internal channel;
at least one locking finger 31 disposed within the hollow internal channel;
and a pin 17 defining a first collar (left of 22) with a shoulder 22 disposed thereon, wherein the locking finger engages the shoulder to secure the pin within the housing.

Regarding claim 2, Clark et al. disclose the pin further comprises a tapered portion (right of 22) such that the shoulder is disposed between the first collar and the tapered portion.

Regarding claim 3, Clark et al. disclose the locking finger is integrally formed within the hollow internal channel.

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Regarding claim 6, Clark et al. disclose the pin further comprises a second collar 27 disposed along the pin that blocks access to the locking finger through a first portion of the hollow internal channel.

Regarding claim 7, Clark et al. disclose the pin is recessed within a second portion of the hollow internal channel.

Regarding claim 17, Clark et al. disclose a connector comprising:

a housing 24 defining a hollow internal channel, the hollow internal channel comprising a first portion and a second portion;

at least one locking finger 31 disposed within the hollow internal channel; a pin defining a first collar (left of 22) with a shoulder 22 disposed thereon;

and a second collar 27 disposed along the pin, wherein the second collar slidably blocks access to the locking finger through the first portion of the hollow internal channel, the pin is recessed within the second portion of the hollow internal channel, and the locking finger engages the shoulder to secure the pin within the housing.

Regarding claim 18, Clark et al. disclose the locking finger is integrally formed within the hollow internal channel.

Regarding claim 27, Clark et al. disclose a housing for use in connecting a pin in a plasma arc apparatus comprising:

a hollow internal channel;

and at least one locking finger 31 disposed within the hollow internal channel, wherein the locking finger engages the pin to secure the pin within the housing.

Regarding claim 29, Clark et al. disclose the pin slidably engages a first portion of the hollow internal channel.

Regarding claim 30, Clark et al. disclose the pin is recessed within a second portion of the hollow internal channel.

Regarding claim 32, Clark et al. disclose a pin for use in a plasma arc apparatus comprising:

- a first collar (left of 22);

- and a shoulder 22 disposed on the first collar, wherein the shoulder is engaged by a housing to secure the pin within the housing.

Regarding claim 33, Clark et al. disclose a second collar disposed along the pin that blocks access to the shoulder.

Regarding claim 35, Clark et al. disclose in a connector for making a connection in a plasma arc apparatus to provide fluid and electric power, the connector having a housing 24 mounting a pin 17 for conducting fluid and electric power, the improvement comprising:

- a tamper resistant connection between the housing and the pin comprising:

- a shoulder 22 disposed on the pin;

- a hollow internal channel within the housing to receive the pin, the hollow internal channel comprising a plurality of locking fingers disposed therein to engage the shoulder and resist removal of the pin from the hollow internal channel.

Regarding claim 36, Clark et al. disclose at least a portion of the pin proximal to the fingers is sized to closely conform to the hollow internal channel, to restrict access to the locking fingers.

Regarding claim 37, Clark et al. disclose the locking fingers slope inwardly and distally, and wherein the shoulder faces proximally when disposed in the hollow internal channel to engage distal ends of the locking fingers and retain the pin against proximal movement.

Regarding claim 38, Clark et al. disclose the hollow internal channel and the pin extend distally beyond the engagement between the locking fingers and the pin, to define a relatively long, restricted space between the pin and the hollow internal channel that restricts access to the fingers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 9, 19, 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al., as applied to the claims above.

Regarding claims 4, 9, 19, 31 and 34, Clark et al. disclose the invention substantially as claimed, but do not disclose the housing and the locking finger

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comprising a fiber-reinforced nylon material nor the pin comprising a brass material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to chose a fiber-reinforced nylon material for the housing and locking finger and brass for the pin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 5, 20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al., as applied to the claims above, in view of Eifler (US 4,406,507).

Regarding claims 5, 20 and 28, Clark et al. disclose the invention substantially as claimed, but do not disclose eight locking fingers evenly spaced around the hollow internal channel. Eifler teaches six fingers, and discloses, "more or less than the number of fingers **14** as shown may be used" (column 3, lines 26-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the housing of Clark et al. with eight, evenly spaced, locking fingers as Eifler teaches to center the pin with respect to the channel.

Claims 8, 10-12, 14-16, 21 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Applicant's Admitted Prior Art ("A.A.P.A.").

Regarding claims 8, 10 and 21, Clark et al. disclose the invention substantially as claimed, but do not disclose the pin being a gas carrying pin. A.A.P.A. teaches a pin for

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carrying gas for use in a plasma arc apparatus. It would have been obvious to one having ordinary skill in the art to modify the pin of Clark et al. with a gas carrying pin as A.A.P.A. teaches to enable the pin to carry fluid and permit use with a plasma arc apparatus.

Regarding claim 11, Clark et al. disclose the locking fingers are integrally formed within the hollow internal channel.

Regarding claim 14, Clark et al. disclose the pin further comprises a second collar 27 disposed along the pin that blocks access to the locking fingers through a first portion of the hollow internal channel.

Regarding claim 15, Clark et al. disclose the pin is recessed within a second portion of the hollow internal channel.

Regarding claim 23, Clark et al. disclose the negative lead gas carrying pin further comprises a second collar 27 disposed along the pin that blocks access to the plurality of locking fingers through a first portion of the hollow internal channel.

Regarding claim 24, Clark et al. disclose the negative lead gas carrying pin is recessed within a second portion of the hollow internal channel.

Regarding claims 12, 16, 25 and 26, Clark et al. in view of A.A.P.A. disclose the invention substantially as claimed, but do not disclose the housing and the locking finger comprising a fiber-reinforced nylon material nor the pin comprising a brass material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to chose a fiber-reinforced nylon material for the housing and locking finger and brass for the pin, since it has been held to be within the general skill of a worker in

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the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of A.A.P.A. as applied to the claims above, and further in view of Eifler.

Regarding claims 13 and 22, Clark et al. in view of A.A.P.A. disclose the invention substantially as claimed, but do not disclose eight locking fingers evenly spaced around the hollow internal channel. Eifler teaches six fingers, and discloses, "more or less than the number of fingers **14** as shown may be used" (column 3, lines 26-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the housing of Clark et al. as modified by A.A.P.A. with eight, evenly spaced, locking fingers as Eifler teaches to center the pin with respect to the channel.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann M McCamey whose telephone number is (703) 305-3422. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AMM
September 18, 2002

A handwritten signature in black ink, appearing to read 'Gary Paumen', with a long horizontal flourish extending to the right.

Gary Paumen
Primary Examiner